UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

UMAR GUIRA, an Infant by his Parent and Natural Guardian, ASSETA NANEMA and ASSETA NANEMA, individually, Plaintiffs, v. UNITED STATES OF AMERICA, Defendant.	:	21 Civ. 2615 (VEC)

MEMORANDUM OF LAW IN SUPPORT OF DEFENDANT UNITED STATES OF AMERICA'S MOTION *IN LIMINE* TO PRECLUDE CERTAIN EXPERT TESTIMONY OF DR. RICHARD L. LUCIANI AND DR. DANIEL ADLER

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PRELIMINARY STATEMENT

Defendant United States of America (the "United States" or the "Government"), by its attorney, Damian Williams, United States Attorney for the Southern District of New York, respectfully submits this memorandum of law in support of its motion *in limine*, pursuant to Rule 702 of the Federal Rules of Evidence, to preclude Dr. Richard L. Luciani and Dr. Daniel Adler, expert witnesses proffered by Plaintiff [U.G.], an infant by his mother and natural guardian, Asseta Nanema, and Plaintiff Asseta Nanema, individually (together, "Plaintiffs") from offering testimony that permanent brachial plexus injuries cannot be caused by the natural forces of labor and that those injuries must result from the clinician applying excessive traction to a baby's head and neck during delivery. These opinions are contrary to the current peer-reviewed scientific literature. This is particularly the case because the brachial plexus injury occurred to the child's posterior shoulder and, therefore, the injury likely occurred before the child's head had crowned and traction could have been applied by Dr. Bui.

BACKGROUND

A. Factual Background

Plaintiff Asseta Nanema was admitted to New York Presbyterian Hospital, Lower Manhattan on September 30, 2018, at 38 weeks pregnant, after a spontaneous rupture of membranes (*i.e.*, her water broke) on September 29, 2018, at 1:00 a.m. *See* Tarczynska Decl. Ex. A ("Luciani Report") at 2. After a lengthy labor, during which Pitocin was administered, Plaintiff U.G. was born on October 2, 2018, at 2:10 a.m. *Id.* 2-3. Dr. Sandy Lau Bui was the delivering physician.[1] *Id.* at 3; *see also* ECF No. 1 ("Compl.") ¶¶ 4, 10 & *id.* Exhibit A at 6.

[1] At all relevant times, Dr. Bui was employed by the Charles B. Wang Community Health Center, which is a federally supported community health center under the Federally Supported Health

Dr. Bui's delivery note indicates that the child was positioned in the right occiput posterior position, and further notes that the "shoulders and body delivered atraumatically." Tarczynska Decl. Ex. B ("OB Delivery Note") at 2; *see also* Tarczynska Decl. Ex. C ("Adler Report") at 3. The delivery note further indicates that an episiotomy was performed to expedite delivery and that no shoulder dystocia[2] was observed. *See* OB Delivery Note at 1.

After delivery, it was noted that U.G.'s right arm was weak. An x-ray was performed at the hospital, which did not reveal bony abnormalities or pathology. *See* Adler Report at 3. U.G. was ultimately diagnosed with a right brachial plexus injury (also known as Erb's Palsy). *Id.* The injured right arm was the arm that was located posteriorly during delivery. *See* Adler Report at 6.

B. Dr. Luciani's Expert Opinion

Plaintiff has proffered Dr. Luciani as an obstetrics and gynecology expert. Dr. Luciani submitted a reported dated October 15, 2021 (the "Luciani Report"), and was deposed on March 7, 2022 (the "Luciani Tr." (excerpts attached as Tarczynska Decl. Ex D)).

In his report, Dr. Luciani offers the following opinions:

- "In the absence of underlying medical causes, the etiology of a permanent brachial plexus injury is traumatic tearing of the nerves secondary to the forceful stretching of

Centers Assistance Act of 1995 and therefore, the United States is the proper defendant for purposes of this Federal Tort Claims Act ("FTCA") case.

[2] "Shoulder dystocia" is a condition during a vaginal delivery when "a newborn's shoulder can sometimes get stuck in the birth canal behind parts of the mother's anatomy." *Lawrey v. Good Samaritan Hosp.*, 751 F.3d 947, 949 (8th Cir. 2014). This can occur in two places. If the shoulder is stuck behind the mother's sacral promontory, a part of the tailbone, this is called a "posterior shoulder dystocia" and occurs before the newborn's head has crowned. *Id.* If the shoulder is stuck behind the mother's public symphysis, the joint located at the front of the pelvic girdle where the two public bones meet, this is called an "anterior shoulder dystocia" and occurs after the newborn's head has crowned. *Id.*

these nerves through the utilization of excessive lateral traction employed by the obstetrical provider." Luciani Report at 4.

- "Natural labor forces will not result in a permanent brachial plexopathy." *Id.*
- "Although the records do not document shoulder dystocia encountered by Dr. Bui at delivery it is apparent that it did occur with lack of timely recognition with proper implementation of shoulder dystocia maneuvers. The only mechanism of injury in this case was excessive lateral traction by Dr. Bui after the head delivered with the right arm impacted." *Id.* 4-5.
- "Obstetrical negligence during the delivery process by Dr. Bui caused the permanent brachial plexus injury noted in this case." *Id.* 5.

During his deposition, Dr. Luciani confirmed these opinions. He testified that he did not "believe that a permanent Erb's palsy can be caused by maternal forces of labor." Luciani Tr. 26:14-15, and that "[t]he only way a permanent posterior shoulder injury can occur in the absence of infection, cancer, genetic abnormality, injury of mispositioning prior to labor, would be with excessive lateral traction would be utilized [sic]." *Id.* 46:10-14; *see also id.* 51:8-13 ("if the injury cannot be attributed to other causes, which we've gone over in detail, than the only mechanism of injury that would cause the permanent brachial plexus injury would be a use of excessive lateral traction off the axial line by the delivering physician."). He further testified that although "[Dr. Bui] did not diagnose the shoulder dystocia, [it] was the source of the injury in this case with the utilization of excessive lateral traction." *Id.* 65:16-19.

C. Dr. Adler's Expert Opinion

Plaintiff has also proffered Dr. Adler, a pediatric neurology expert, to *inter alia*[3] provide an opinion as to the causation of U.G.'s brachial plexus injury. Dr. Adler has submitted a report dated November 19, 2021[4] (the "Adler Report"), and was deposed on March 16, 2022 ("Adler Tr." (excerpts attached as Tarczynska Decl. Ex. E).

Dr. Adler offered the following opinions regarding causation:

- "In this case, where the aforementioned medical conditions [cancer or infection] are not defined in the medical records, the permanent brachial plexus injury in the right arm suffered by [U.G.] was caused by traumatic tearing of the nerves of the brachial plexus. . . . It is my medical opinion the degree of forceful stretch of the nerves required to produce the traumatic neonatal brachial plexus injury seen in this case occurred after the head of [U.G.] was delivered during the movement of the head away from the injured right arm created by the obstetrician." Adler Report 5-6.
- "It has been argued by some that permanent traumatic neonatal brachial plexus injury occurs with movement of the fetal head created by the forces of uterine contraction along with the mother pushing during labor and before any physician efforts to deliver the fetus. It is my medical opinion the maternal forces of labor have never been proven to be the cause of a permanent neonatal brachial plexus when the fetus does not have exaggerated risk of nerve stretch." *Id.* 6.

[3] Dr. Adler also offers an opinion as to U.G.'s current physical condition and his future prospects. Those opinions are not the subject of the Government's motion.

[4] Dr. Adler also provided a report dated October 19, 2020, which attached to Complaint as Exhibit B). During his deposition, Dr. Adler testified that the November 19, 2021 report is the most current. *See* Adler Tr. 31-32.

- "When the injured shoulder is not positioned anteriorly under the pubic bone but located posteriorly as in this case, some will argue this is proof the brachial plexus injury must have occurred on an intrauterine basis. This is because the direction the fetal head is moved by the obstetrician to facilitate delivery of the fetal body is typically down. In this case, neither the directional movement of the fetal head nor the angle of head movement off axis created by the operator are described in the medical records. It is therefore my medical opinion that the fetal head in this case was moved in an upward direction by the obstetrician after it delivered. . . . It is also my medical opinion that traumatic injury to [U.G.]'s brachial plexus could therefore have been avoided if the delivery could have been accomplished by the obstetrician with little to no movement of the head, thus limiting the amount of forceful stretch of the nerve roots." *Id.*

During his deposition, Dr. Adler confirmed that he was offering the opinion that:

> The head moved in a way to stretch the nerves beyond their point of tolerance and there was tearing of the – of the fifth and sixth cervical nerves in some form. Probably a neuroma, which is a scar that involves the fifth and sixth cervical nerves and that this permanent injury occurred after the head delivered. Dr. Bui put forth efforts to deliver the baby and in doing so caused the nerves to be stretched and torn.

Adler Tr. 69:24-70:8. When asked about the basis of his opinion, he stated "injuries of this type do not occur at anytime in a healthy newborn, meaning, without other medical conditions or deformities does [sic] not occur except after the head delivers and the doctor moves the head." *Id.* at 70:14-18. He further explained that in his opinion,

> An injury of this like had never been reported to occur on intrauterine basis. And any newborn that was healthy and non-asphyxiated. This baby was healthy and non-asphyxiated. *Therefore, the injury could not occur, has never occurred, has never been reported to occur on an intrauterine basis. It must and can only occur*

> *after the head delivers and the doctor moves the head. That's the only way it occurs, in my opinion.*

Id. at 94:5-15 (emphasis added). He went on to state that the basis for his opinion that Dr. Bui must have moved the head is the nature of the injury: "The injury is proof of what happened." *Id.* at 95:10-14.

ARGUMENT

I. LEGAL STANDARDS

A. Legal Standard for Motion *In Limine*

"The purpose of an *in limine* motion is to aid the trial process by enabling the Court to rule in advance of trial on the relevance of certain forecasted evidence, as to issues that are definitely set for trial, without lengthy argument at, or interruption of, the trial." *Palmieri v. Defaria*, 88 F.3d 136, 141 (2d Cir. 1996) (internal quotation marks omitted); *see also Highland Capital Mgmt., L.P. v. Schneider*, 379 F. Supp. 2d 461, 467 (S.D.N.Y. 2005); *see generally* Fed. R. Evid. 104. *In limine* motions therefore serve the salutary goal of "streamlin[ing] trials and settl[ing] evidentiary disputes in advance." *United States v. Tokash*, 282 F.3d 962, 968 (7th Cir. 2002).

The Court may rely on the Federal Rules of Evidence and its own broad discretion in determining whether or not to exclude certain evidence at trial. *Shatkin v. McDonnell Douglas Corp.*, 727 F.2d 202, 207 (2d Cir. 1984); *United States v. Corr*, 543 F.2d 1042, 1051 (2d Cir. 1976). Ordinarily, evidence is admissible so long as it is relevant, meaning that it has "any tendency to make a fact more or less probable than it would be without the evidence" and "the fact is of consequence in determining the action," Fed. R. Evid. 401, and not otherwise barred under the Rules, Fed. R. Evid. 402. The proponent of the evidence, however, bears the burden of proving that it is admissible. *See Evans v. Port Auth. of N.Y. & N.J.*, 192 F. Supp. 2d 247, 263 n.121 (S.D.N.Y. 2002) ("The burden of establishing admissibility, of course, is with the proponent of the

evidence.”).

B. Legal Standard for Admissibility of Expert Testimony

Testimony proffered by a party’s expert must be excluded from consideration if it fails to meet the standards set forth in Rule 702 of the Federal Rules of Evidence. *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146–48 (1997). The proponent of the expert testimony bears the burden of demonstrating its admissibility by a preponderance of the evidence. *Berk v. St. Vincent’s Hosp. & Med. Ctr.,* 380 F. Supp. 2d 334, 349 (S.D.N.Y. 2005). As the Supreme Court held in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, in upholding Rule 702, trial courts perform a “gatekeeping role” to ensure “that an expert’s testimony both rests on a reliable foundation and is relevant to the task at hand.” 509 U.S. 579, 597 (1993). Rule 702 provides:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

> (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
> (b) the testimony is based on sufficient facts or data;
> (c) the testimony is the product of reliable principles and methods; and
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702.

“As interpreted by courts Rule 702 lays out a three-step inquiry to determine whether testimony by a party’s expert should be deemed admissible.” *Berk*, 380 F. Supp. 2d at 349. First, a court must determine whether a witness is qualified as an expert. *Nimely v. City of New York*, 414 F.3d 381, 397 (2d Cir.2005). To do so, “courts compare the area in which the witness has superior knowledge, education, experience, or skill with the subject matter of the proffered testimony.” *Lidle ex rel. Lidle v. Cirrus Design Corp.*, No. 08 Civ. 1253 (BSJ), 2010 WL 2674584, at *3 (S.D.N.Y. July 6, 2010) (internal quotation marks omitted) (quoting *United States v. Tin Yat*

Chin, 371 F.3d 31, 40 (2d Cir. 2004)). If the qualification standard is met, a court must next evaluate the methodology and reasoning underlying an expert's conclusions. *Berk*, 380 F. Supp. 2d at 350. In *Daubert*, the Supreme Court identified several factors a court may consider in determining the reliability of a methodology: (1) whether a theory or technique has been or can be tested, (2) whether it has been subject to peer review or publication, (3) its error rate and "the existence and maintenance of standards controlling the technique's operation," (4) and whether the particular theory or technique has gained "general acceptance" in the scientific community. 509 U.S. at 593-94.

Because a court's "gatekeeping inquiry must be tied to the facts of a particular case," *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 150 (1999) (internal quotation marks omitted),, it may consider other factors in deciding whether expert testimony is reliable, including:

• whether the experts have developed their opinions expressly for purposes of testifying;

• whether the expert has unjustifiably extrapolated from an accepted premise to an unfounded conclusion; and

• whether the expert is being as careful as he would be in his regular professional work outside his paid litigation consulting.

Fed R. Evid. 702, Advisory Committee Note (2000 Amendment). At bottom, the court must do "a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue." *Daubert*, 509 U.S. at 593-94.

Finally, if the first two elements are satisfied, a court must examine the relevance of the proffered expert's testimony "to determine whether the conclusions it draws will aid the factfinder in answering the questions at issue in the case." *Berk*, 380 F. Supp. 2d at 350.

II. LUCIANI AND ADLER CAUSATION OPINIONS ARE INADMISSIBLE UNDER FEDERAL RULE OF EVIDENCE 702

Both Dr. Luciani and Dr. Adler intend to offer the opinions that: (1) a brachial plexus injury could not have occurred absent the movement of U.G.'s head by Dr. Bui, and (2) that the forces of labor could not have caused U.G.'s injuries. Courts have precluded such expert testimony because it

> is not based on sufficient facts or data, is not the product of reliable principles or methods, is not applicable to the facts of th[e] case, would not help the trier of fact understand the evidence or determine any fact at issue in th[e] case, and would be irrelevant and unreliable.

Lawrey v. Kearney Clinic, P.C., No. 8:11CV63, 2012 WL 3583164, at *4 (D. Neb. Aug. 20, 2012), (precluding plaintiff's expert from "offering any opinion that maternal expulsive forces of labor cannot cause permanent brachial plexus injuries, or that birth-related brachial plexus injuries are always the result of traction applied to an infant's head and neck by the birth-attendant, or that the injury to Plaintiff . . . was caused by Defendant . . . applying excessive traction to [infant's] head and neck."), *aff'd sub nom. Lawrey v. Good Samaritan Hosp.*, 751 F.3d 947 (8th Cir. 2014); *see also Castro v. United States*, No. 2:15-CV-378-FTM-38CM, 2016 WL 5942354, at *1 (M.D. Fla. Oct. 13, 2016) (granting Government's motion to "preclude Plaintiff's experts from testifying that the natural forces of labor could not have caused the injury.").

A. The Natural Forces of Labor are A Recognized Cause of Permanent Brachial Plexus Injuries

Plaintiff's experts' theories are contrary to what is generally accepted by the obstetric medical community. The American College of Obstetricians and Gynecologists ("ACOG"), which is the nation's leading association of medical professionals specializing in obstetrics and gynecology, recognizes that maternal forces alone are an accepted cause of brachial plexus

injuries.[5] In 2014, an ACOG task force released a peer-reviewed compendium entitled "Neonatal Brachial Plexus Palsy" for the stated purpose of summarizing "the current state of the scientific knowledge, as set forth in the peer reviewed and relevant historical literature, about the mechanisms which may result in neonatal brachial plexus palsy." ACOG Task Force Compendium, "Neonatal Brachial Plexus Palsy" 2014 at p. xi (attached to Tarczynska Declaration as Exhibit F). The ACOG task force concluded:

> What is known at this time with reasonable medical certainty is that NBPP [Neonatal Brachial Plexus Palsy] occurs infrequently and ***can be caused by maternal (endogenous) forces*** or clinician-applied (exogenous) forces or a combination of both.

Id. at xviii (emphasis added). Plaintiffs' experts views are at odds with the conclusions of the ACOG report. *See, e.g.,* Luciani Tr. 34:14-16.

> [The] intrauterine contraction theory ... is recognized by the American College of Obstetricians and Gynecologists ... [and] ... is supported by research, clinical study, and a body of peer-reviewed literature spanning almost twenty years. It is accepted in the scientific community as illustrated by the fact that it has been adopted in authoritative texts and in the medical practice guidelines.

Estate of Ford v. Eicher, 250 P.3d 262, 268 (Colo. 2011). The conclusion that brachial plexus injuries can be caused by the natural forces of labor has been accepted by numerous courts. *See,*

[5] Numerous courts have looked at the ACOG's 2014 monograph on shoulder dystocia as the "most authoritative source of scientific literature on the issues of shoulder dystocia and brachial plexus injury." *Williams v. United States*, 455 F. Supp. 3d 403, 415-16 (E.D. Mich. 2020); *see also L.M. ex rel. Dussault v. Hamilton*, 200 Wash. App. 535, 545 (2017) (recognizing the ACOG as "an important report" that has "widespread acceptance" and "has been endorsed by many gynecological-obstetrical organizations in the United States and worldwide."); *Fonville v. Zeid*, 327 So.3d 658, 672 n.20 (Miss. Ct. App. 2021) (noting that the ACOG monograph is "endorsed by" 1) The American Academy of Pediatrics; (2) The American Academy of Physical Medicine and Rehabilitation; (3) The American College of Nurse-Midwives; (4) The American Gynecological and Obstetrical Society; (5) The American Society for Reproductive Medicine; (6) The Child Neurology Society; (7) The Japan Society of Obstetrics and Gynecology; (8) The Royal Australian and New Zealand College of Obstetricians and Gynecologists; (9) The Society for Maternal-Fetal Medicine; and (10) The Society of Obstetricians and Gynecologists of Canada.).

e.g., Castro, , 2016 WL 5942354, at *6 ("All credible evidence before the Court suggests that brachial plexus injuries can and do occur in a fixed percentage of births where the clinician applied no traction."); *see also Dussault*, 200 Wash. App. at 549 ("Extensive peer-reviewed literature supports the theory that NFOL ["Natural Forces of Labor"] may cause BPIs. Numerous experts and other courts agree.").[6]

Courts have found the natural forces of labor explanation particularly persuasive where, are here, the brachial plexus injury was to the posterior shoulder. In *Lawrey*, the Eighth Circuit explained in affirming the district court's decision to preclude the plaintiff's experts testimony:

> Brachial plexus injuries are caused by the force which dislodges a newborn's stuck shoulder and occur when the shoulder becomes dislodged. [The child's] injury resulted from a posterior shoulder dystocia which, as previously noted, occurs before a baby's head has crowned. This means the force which caused [the child's] injury must have been applied while her head and neck were still in the birth canal. [The plaintiff's] experts failed to explain how [the delivering physician] could or did apply traction to [the child's] head and neck while her head and neck were still in the birth canal. [The plaintiff's] experts also failed to explain how any traction [the delivery physician] allegedly applied after [the child's] head and neck exited the birth canal could have caused an injury which occurred before her head had crowned.

[6] *See also Clark ex rel. Clark v. Heidrick*, 150 F.3d 912, 915 (8th Cir. 1998) (the intrauterine forces theory was a scientifically valid method to determine the cause of brachial plexus injuries and differential diagnosis was a scientifically valid way to apply that theory); *Silong v. United States*, No. CVF06–0474 (LJO) (DLB), 2007 WL 2535126, at *3 (E.D. Cal. Aug. 31, 2007) (finding in an FTCA case that defense expert's opinion that the maternal forces of labor may have caused the permanent brachial plexus injury was supported by "existing literature" and the evidence was based on "accepted scientific methodologies and learned treatises"); *Potter ex rel. Potter v. Bowman*, No. 05CV00827 (REB) (PAC), 2006 WL 3760267, *3 (D. Colo. Dec.18, 2006) (admitting expert testimony regarding the intrauterine forces theory); *Salvant v. State*, 935 So.2d 646, 656–57 (La. 2006) (holding that there was ample evidence in the record that a brachial plexus injury can occur for unknown reasons); *D'Amore v. Cardwell*, No. L–06–1342, 2008 WL 852791 at ¶ 64 (Ohio Ct. App. Mar. 31, 2008) (holding that the theory of intrauterine forces as a likely causation theory was properly admitted); *Taber v. Roush*, 316 S.W.3d 139, 160 (Tex. App. 2010) (affirming trial court's decision to allow expert testimony regarding the natural forces of labor as a potential cause of a permanent brachial plexus injury); *Bayer ex rel. Petrucelli v. Dobbins*, 885 N.W.2d 173, 180-81 (Wis. Ct. App. 2016).

Id. at 953.

Similarly in *Castro v. United States*, the court granted the Government's *Daubert* motion to preclude the plaintiff's experts from testifying that "permanent brachial plexus injuries cannot be caused by the natural forces of labor and that those injuries must result from the clinician applying excessive traction to a baby's head and neck during delivery." 2016 WL 5942354, at *6. The court explained that "[a]ll credible evidence before the Court suggests that brachial plexus injuries can and do occur in a fixed percentage of births where the clinician applies not traction." *Id.* The court noted that the Government had submitted upwards of five peer-reviewed and published articles and textbook excerpts, and found that "this medical literature backs the opinion that, because Plaintiff's injury occurred to his posterior, rather than anterior, shoulder [the delivering physician's] actions are not likely the cause of the injury." *Id.* at *4. The court found "particularly persuasive" the 2014 ACOG compendium and noted the following excerpt:

> During a posterior shoulder impaction at the level of the sacral promontory, it is not possible for the clinician to apply extraction forces that are often put forth as the cause of the injury because the head has not delivered. The high rate of posterior shoulder involvement in deliveries that do not involve shoulder dystocia indicates that severe and persistent injuries may occur to the brachial plexus without the clinician's application of traction during delivery.

Id. at *5 (quoting ACOG at 27) (internal quotation marks omitted). Similarly, the Royal College of OB/GYN, which is the leading association of OB/GYN professionals in England, has stated:

> Specifically, where there is Erb's palsy, it is important to determine whether the affected shoulder was anterior or posterior at the time of delivery, because damage to the plexus of the posterior shoulder is considered not due to action by the accoucheur.

Royal College of OB/GYN Guideline #42, "Shoulder dystocia." December 2005 (attached as Tarczynska Decl. Ex. I).

The literature and case law firmly establish that brachial plexus injuries occurring to the posterior shoulder are much more likely to have been caused by the natural forces of labor, and because the injury likely occurred before the child's head had crowned, it is unlikely that such injuries could be caused by any inappropriate traction applied by the clinician.

B. Plaintiff's Arguments Disputing the Fact that the Forces of Labor Could Have Caused U.G.'s Brachial Plexus Injury Are Without Merit

In the joint pre-conference letter, Plaintiffs cited *Muhammad v. Fitzpatrick*, 937 N.Y.S.2d 519 (App. Div. 2012), and *Nobre ex rel. Ferraro v. Shanahan*, 976 N.Y.S.2d 841, 848 (2013), for the proposition that the forces of labor theory is a "novel theory" and "not generally accepted within the relevant medical community." ECF No. 32 ("March 24, 2022 Joint Letter") at 3 (quoting *Muhammad*, 937 N.Y.S.2d at 521). Their reliance on these cases is misplaced. As an initial matter, *Muhammad* did not apply *Daubert*, but applied *Frye v. United States*, 293 F. 1013 (D.C. Cir.1923). The *Frye* test was invalidated by the United States Supreme Court in *Daubert*, 509 U.S. 579. Moreover, these cases are outliers and were decided prior to the 2014 ACOG Task Force compendium. In *Nobre*, the court criticized *Muhammad's* conclusion that the forces of nature theory was "novel" and that "the defendants' theory in *Muhammad* as presented in that case was limited by the proof presented to the court in support of the theory. The expert in *Muhammad* relied on only a portion of the medical literature on the subject considered [in *Nobre*]." *Nobre*, 976 N.Y.S. 2d at 851-53. In *Nobre* the defense was precluded as without foundation in the proof submitted in that specific cases, which is a case by case determination. *Id.* at 857. Since that time, in a more recent New York case, the Appellate Division affirmed the trial court's decision "allowing defendants to set forth a defense that the injuries sustained by the child could have occurred during the birthing process." *Ambrose v. Brown*, 96 N.Y.S.3d 414, 416 (App. Div. 2019).

Likewise, Plaintiffs' experts' attempts to draw a distinction between temporary brachial plexus injuries (which they both agree can occur as a result of material forces of labor) and permanent ones (which they contend cannot occur as a result of such forces), *see* ECF No. 32 at 4-5, are without merit. There is no support in the scientific consensus for such a distinction. Indeed, the ACOG recognized that brachial plexus injuries have "been shown to occur entirely unrelated to traction, with studies demonstrating cases of *both transient and persistent* [neonatal brachial plexus palsy] in fetuses delivered vaginally without clinically evident shoulder dystocia or fetuses delivered by cesarean without shoulder dystocia." *Neonatal Brachial Plexus Palsy* at 17(emphasis added). Recent original research published in *Obstetrics & Gynecology* in 2020 addresses this point directly: "Although it might be hypothesized that transient brachial plexus injury may occur as a result of the . . . uterine forces but permanent injury could occur as a result of excessive, physician applied traction, neither published data nor biological plausibility support such a concept." Grace J. Johnson, M.D. et al., "Pathophysiologic Origins of Brachial Plexus Injury," *Obstetrics & Gynecology*, 136:4 at 728 (Oct. 2020) (attached as Tarczynska Decl. Ex. H); *see also id.* at 725 ("[N]umerous reports exist of both transient and permanent brachial plexus injury, including nerve root avulsion, occurring both at vaginal delivery in the absence of shoulder dystocia and at the time of cesarean delivery. Such reports demonstrate that forces other than those applied during maneuvers to relieve shoulder dystocia are the cause of at least half of the cases of brachial plexus injury."); *Bayer*, 885 N.W.2d at 181 (stating that the medical publications reviewed "support the notion that, from a medical perspective, a permanent brachial plexus injury is simply a temporary brachial plexus injury that did not recover."); *Silong*, 2007 WL 2535126 at *3 (finding in an FTCA case that defense expert's opinion that the maternal forces of labor may have caused the permanent brachial plexus injury was supported by "existing literature" and the evidence was

based on "accepted scientific methodologies and learned treatises"); *Eicher*, 250 P.3d at 271-72 (holding that expert's testimony that maternal forces caused the permanent brachial plexus injury at issue was reliable); *D'Amore*, 2008 WL 852791 at *6 (admitting Dr. Gherman's testimony that permanent brachial plexus injuries can be caused by maternal forces); *Taber*, 316 S.W.3d at 160 (affirming trial court's decision to allow expert testimony regarding the natural forces of labor as a potential cause of a permanent brachial plexus injury).

In sum, the Court should preclude Plaintiffs' experts from offering testimony that that permanent brachial plexus injuries cannot be caused by the natural forces of labor and that those injuries must result from the clinician applying excessive traction to a baby's head and neck during delivery, as such opinions are unreliable because they are contrary to the generally accepted scientific consensus.

CONCLUSION

For the foregoing reasons, the Court should preclude Dr. Luciani and Dr. Adler from testifying that (1) a brachial plexus injury could not have occurred absent the movement of U.G.'s head by Dr. Bui, and (2) that the forces of labor could not have caused U.G.'s injuries.

Dated: New York, New York
April 29, 2022

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